

Appl. No. 09/665,771
Docket No.: 7797XMQ
Amdt. Dated August 11, 2003
Reply to Office Action of May 14, 2003
Customer No. 27752

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A thin until wet material suitable for use as an acquisition layer in an absorbent article, the material comprising a ~~fibrous component~~ blend of fibers, said ~~fibrous component~~ fibers consisting of a blend of crosslinked cellulosic fibers and high surface area cellulosic fibers, said material further comprising polymeric temporary binding means and a wet strength means, said material being held in a compressed state by said temporary binding means until exposure to an aqueous liquid, wherein:

when said material is saturated by an aqueous fluid, said material has an expanded wet density of between about 0.04 grams/cm³ and about 0.4 grams/cm³ and a medium capillary desorption height (CDH) of less than about 25 cm;

said temporary binding means helps maintain said material at a compressed dry density of between about 0.06 grams/cm³ and about 1.2 grams /cm³ until said material is exposed to an aqueous fluid wherein, upon such exposure, said temporary binding means releases so that said material expands at a compressed initial z-direction expansion rate of at least about 0.5 millimeters/second; and

the ratio of said compressed dry density to said expanded wet density is greater than about 1.5:1.

2. (Original) A thin until wet material according to Claim 1 wherein said expanded wet density is between about 0.04 grams/cm³ and about 0.1 grams/cm³.
3. (Original) A thin until wet material according to Claim 1 wherein said material has a CDH of less than about 20 cm.
4. (Original) A thin until wet material according to Claim 3 wherein said material has a CDH of less than about 12 cm.

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5. (Original) A thin until wet material according to Claim 1 wherein said compressed dry density is between about 0.06 grams/cm³ and about 0.4 grams/cm³.
6. (Original) A thin until wet material according to Claim 1 wherein said ratio of said compressed dry density to expanded wet density said is greater than about 2:1.
7. (Original) A thin until wet material according to Claim 6 wherein said ratio of said compressed dry density to said expanded wet density is greater than about 2.5:1.
- 8.-9. (Canceled)
10. (Previously presented) A thin until wet material according to Claim 1 wet strength means is selected from the group consisting of wet strength resins, bicomponent fibers, powdered adhesives, and combinations thereof.
11. (Original) A thin until wet material according to Claim 10 wherein said wet strength means comprises a wet strength resin.
12. (Original) A thin until wet material according to Claim 11 wherein said wet strength resin comprises a polyamide epichlorohydrin resin.
13. (Original) A thin until wet material according to Claim 1 wherein said temporary binding means comprises a water soluble or water dispersible polymer.
14. (Original) A thin until wet material according to Claim 13 wherein said water soluble or water dispersible polymer is selected from the group consisting of polyacrylic acid and copolymers and salts thereof; polymethacrylic acid and copolymers and salts thereof; polyvinyl alcohol; starch; modified cellulose; modified starch; modified cellulose; gum

acacia/gum arabic; soluble gelatin; and mixtures thereof.

15. (Original) A thin until wet material according to Claim 14 wherein said water soluble or water dispersible polymer is selected from the group consisting of polyacrylic acid and copolymers and salts thereof; polymethacrylic acid and copolymers and salts thereof; polyvinyl alcohol; and mixtures therof.

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16.-19. (Canceled)

20. (Previously presented) A thin until wet material according to Claim 1 wherein said high surface area fibers have a Canadian Standard Freeness of less than about 200.
21. (Previously presented) A thin until wet material according to Claim 20 wherein said high surface area fibers comprise crill.

22.-25. (Canceled)

26. (Currently Amended) An absorbent core for an absorbent article said absorbent core comprising:

an acquisition member, said acquisition member comprising a thin until wet material wherein said thin until wet material comprising a fibrous-component blend of fibers, said fibrous-component fibers consisting of a blend of crosslinked cellulosic fibers and high surface area cellulosic fibers, said material further comprising wet strength means, and polymeric temporary binding means wherein:
said wet strength means connects at least a portion of the individual fibers forming said assembly such that, when said material is saturated by an aqueous fluid, said material has an expanded wet density of between about 0.04 grams/cm³ and about 0.5 grams/cm³ and a CDH of less than about 25 cm;
said temporary binding means helps maintain said material at a compressed dry density of between about 0.06 grams/cm³ and about 1.2 grams /cm³ until said material is exposed to an aqueous fluid wherein, upon such exposure, said temporary binder releases so that said material expands at a compressed initial z-direction expansion rate of at least about 0.5 millimeters/second; and
the ratio of said compressed dry density to said expanded wet density is greater than about 1.5:1; and
at least one additional core component in fluid communication with said acquisition member.

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27. (Original) An absorbent core according to Claim 26 wherein said wet strength means comprises a wet strength resin.
28. (Original) An absorbent core according to Claim 26 wherein said temporary binding means is selected from the group consisting of polyacrylic acid and copolymers and salts thereof; polymethacrylic acid and copolymers thereof; polyvinyl alcohol; and mixtures thereof.
29. (Canceled)
30. (Previously presented) An absorbent core according to Claim 26 wherein said high surface area fibers comprise fibers having a Canadian Standard Freeness of less than about 200.
31. (Previously presented) A thin until wet material, the material comprising an assembly of between about 75% and about 99% cellulosic fibers, said cellulosic fibers consisting of a blend of crosslinked cellulosic fibers and high surface cellulosic fibers, from about 0.1% to about 5% of a material suitable for use as a wet strength means, and from 0% to about 20% of a material suitable for use as a temporary binding means, wherein said material has an expanded wet density of between about 0.04 grams/cm³ and about 0.5 grams/cm³ and a CDH of less than about 25 cm.
- 32.-33. (Canceled)
34. (Original) A thin until wet material according to Claim 1, wherein the process used to produce said thin until wet material includes softening steps so that said material has a buckling force of less than about 3 Newtons.
35. (Canceled)
36. (Currently Amended) A method of producing a fibrous thin until wet material suitable for use as an acquisition member in an absorbent article, said method comprising the

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steps of:

- a) providing a blend of fibers, said fibers consisting of crosslinked cellulosic fibers and high surface area cellulosic fibers;
- b) treating said blend with a wet strength means;
- c) forming said treated fibrous material into a nascent thin until wet material;
- d) treating said nascent thin until wet material with a polymeric temporary binding means;
- e) densifying said nascent thin until wet material; and
- f) activating said temporary binding means to form a thin until wet material wherein:

said wet strength means connects at least a portion of said crosslinked cellulosic fibers and said high surface area cellulosic fibers such that, when said thin until wet material is saturated by an aqueous fluid, said material has an expanded wet density of between about 0.04 grams/cm³ and about 0.5 grams/cm³ and a CDH of less than about 25 cm;

said temporary binding means helps maintain said thin until wet material at a compressed dry density of between about 0.06 grams/cm³ and about 1.2 grams/cm³ until said thin until wet material is exposed to an aqueous fluid wherein, upon such exposure, said temporary binder releases so that said thin until wet material expands at a compressed initial z-direction expansion rate of at least about 0.5 millimeters/second; and

the ratio of said compressed dry density to said expanded wet density is greater than about 1.5:1.